

Dual Bridge Angular and Linear Accelerometer

Abstract

An accelerometer includes an inertial platform maintaining an attitude in response to a platform stabilizing controller signal and defining a spin axis and a reference plane. An accelerometer, coupled to the inertial platform a distance from the spin axis, defines a flex axis. The accelerometer generates an accelerometer signal in response to acceleration of the accelerometer. A second accelerometer defines a second flex axis, and is also coupled to the inertial platform a distance from the spin axis. The second accelerometer generates a second accelerometer signal in response to acceleration of the second accelerometer. A controller receives the first accelerometer signal and the second accelerometer signal and generates a linear acceleration signal in response to a sum of the first accelerometer signal and the second accelerometer signal and generates an angular acceleration signal from the difference. The controller further generates the platform stabilizing controller signal in response to the first acceleration signal and the second acceleration signal.